REMARKS

Claims 1 – 26 are pending in the application. Claims 1 – 26 have been rejected. Claims 1, 5, 8, 14, 20 and 24 have been amended.

Regarding the objections to the reference to Figure 5, the examiner's attention is directed to Page 4, lines 13 and 14 which set forth "Figure 5, including Figure 5A and Figure 5B, is a flow chart depicting the process of a Virtual WIP Manager object in more detail."

Regarding the 35 U.S.C. § 112, second paragraph rejection, claims 1, 5, 8, 14, 20 and 24 have been amended to address this rejection.

Claims 1 – 26 stand rejected under Weaver et al., U.S. Patent No. 5,446,671 (Weaver). These rejections are respectfully traversed.

The present invention, as set forth by independent claim 1, relates to an automated system that monitors work-in-process ("WIP") in a manufacturing facility. The system includes a software object that determines when an evaluation cycle should be invoked, and a recommendation wakeup listener object that performs the evaluation cycle. The recommendation wakeup listener object further includes a software object that identifies a bottleneck workstation, a software object that calculates a WIP value representing the amount of work approaching the bottleneck workstation, a software object that determines whether the WIP value is projected to fall below a control limit during an evaluation period, and a software object that recommends, if the WIP value is projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into a manufacturing line of the manufacturing facility.

The present invention, as set forth by independent claim 5, relates to an automated system that controls work-in-process ("WIP") in a manufacturing facility. The system includes a software object that determines when an evaluation cycle should be invoked, and a recommendation wakeup listener object that performs the evaluation cycle. The recommendation wakeup listener object further includes an object that identifies a plurality of bottleneck workstations, an object that calculates a WIP value for each of the plurality of

bottleneck workstations, wherein each of the WIP values represents the amount of work approaching the corresponding bottleneck workstation, an object that determines, for each WIP value, whether the WIP value is projected to fall below a control limit during an evaluation period, and an object that recommends, if any of the WIP values are projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into a manufacturing line of the manufacturing facility.

The present invention, as set forth by independent claim 8, relates to a method of controlling work-in-process ("WIP"). The method includes providing a software object that determines when an evaluation cycle should be invoked, and providing a recommendation wakeup listener object that performs the evaluation cycle. The providing recommendation wakeup listener object further includes providing a software object that identifies a bottleneck workstation, providing a software object that calculates a WIP value representing the amount of work approaching the bottleneck workstation, providing a software object that determines whether the WIP value is projected to fall below a control limit during an evaluation period, and providing a software object that recommends, if the WIP value is projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into a manufacturing line.

The present invention, as set forth by independent claim 14, relates to a method of controlling work-in-process ("WIP"). The method includes determining when an evaluation cycle should be invoked, and performing the evaluation cycle. The performing the evaluation cycle further includes identifying a bottleneck workstation, calculating a WIP value representing the amount of work approaching the bottleneck workstation, determining whether the WIP value is projected to fall below a control limit during an evaluation period, and recommending, if the WIP value is projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into a manufacturing line.

The present invention, as set forth by independent claim 20, relates to a manufacturing facility which includes a bottleneck workstation, and an automated system that monitors work-in-process ("WIP") wherein the automated system includes a software object that determines when an evaluation cycle should be invoked, and a recommendation wakeup listener object that

performs the evaluation cycle. The recommendation wakeup listener object further includes a software object that identifies the bottleneck workstation, a software object that calculates a WIP value representing the amount of work approaching the bottleneck workstation, a software object that determines whether the WIP value is projected to fall below a control limit during an evaluation period, and a software object that recommends, if the WIP value is projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into a manufacturing line.

The present invention, as set forth by independent claim 24, relates to a manufacturing facility which includes a plurality of bottleneck workstations, a software object that determines when an evaluation cycle should be invoked, and a recommendation wakeup listener object that performs the evaluation cycle. The recommendation wakeup listener object further includes an object that identifies the plurality of bottleneck workstations, an object that calculates a WIP value for each of the plurality of bottleneck workstations, wherein each of the WIP values represents the amount of work approaching the corresponding bottleneck workstation, an object that determines, for each WIP value, whether the WIP value is projected to fall below a control limit during an evaluation period, and an object that recommends, if any of the WIP values are projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into a manufacturing line of the manufacturing facility.

Weaver discloses a look-ahead method for determining optimum production schedules for each production step based on factory-wide monitoring of in-process part queues at all potential production bottlenecks. More specifically, Weaver relates to a method for dispatching, i.e., the method is directed to trying to determine which lot should be dispatched next. (See e.g., Weaver Abstract.) Additionally, Weaver sets forth that the program functions in a sleep mode that is then interrupt driven. (See e.g., Col. 4, line 64 – Col. 5, line 15).

Weaver, taken alone or in combination, does not teach or suggest an automated system that monitors work-in-process ("WIP") in a manufacturing facility which includes a software object that determines when an evaluation cycle should be invoked, and a recommendation wakeup listener object that performs the evaluation cycle much less such a system that includes a software object that recommends, if the WIP value is projected to fall below the control limit

during the evaluation period, that a selected amount of additional work be released into the manufacturing line, all as required by independent claim 1. Accordingly, claim 1 is allowable over Weaver. Claims 2 – 4 depend from claim 1 and are allowable for at least this reason.

Weaver, taken alone or in combination, does not teach or suggest an automated system that controls work-in-process ("WIP") in a manufacturing facility which includes a software object that determines when an evaluation cycle should be invoked, and a recommendation wakeup listener object that performs the evaluation cycle, much less such a system that includes an object that recommends, if any of the WIP values are projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into the manufacturing line, all as required by independent claim 5. Accordingly, claim 5 is allowable over Weaver. Claims 6 and 7 depend from claim 5 and are allowable for at least this reason.

Weaver, taken alone or in combination, does not teach or suggest a method of controlling work-in-process ("WIP") which includes providing a software object that determines when an evaluation cycle should be invoked, and providing a recommendation wakeup listener object that performs the evaluation cycle, much less such a method that includes providing a software object that recommends, if the WIP value is projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into the manufacturing line, all as required by independent claim 8. Accordingly, claim 8 is allowable over Weaver. Claims 9 – 13 depend from claim 8 and are allowable for at least this reason.

Weaver, taken alone or in combination, does not teach or suggest a method of controlling work-in-process ("WIP") which includes determining when an evaluation cycle should be invoked, and performing the evaluation cycle, much less such a method that includes recommending, if the WIP value is projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into the manufacturing line, all as required by independent claim 14. Accordingly, claim 14 is allowable over Weaver. Claims 15 – 19 depend from claim 14 and are allowable for at least this reason.

Weaver, taken alone or in combination, does not teach or suggest a manufacturing facility which includes a bottleneck workstation, and an automated system that monitors work-in-process ("WIP") wherein the automated system includes a software object that determines when an

evaluation cycle should be invoked, and a recommendation wakeup listener object that performs the evaluation cycle, much less such a facility that includes a software object that recommends, if the WIP value is projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into the manufacturing line, all as required by independent claim 20. Accordingly, claim 20 is allowable over Weaver. Claims 21 – 23 depend from claim 20 and are allowable for at least this reason.

Weaver, taken alone or in combination, does not teach or suggest a manufacturing facility which includes a plurality of bottleneck workstations, a software object that determines when an evaluation cycle should be invoked, and a recommendation wakeup listener object that performs the evaluation cycle, much less such a system that includes an object that determines, for each WIP value, whether the WIP value is projected to fall below a control limit during an evaluation period, and an object that recommends, if any of the WIP values are projected to fall below the control limit during the evaluation period, that a selected amount of additional work be released into the manufacturing line, all as required by independent claim 24. Accordingly, claim 24 is allowable over Weaver. Claims 25 and 26 depend from claim 24 and are allowable for at least this reason.

CONCLUSION

The claims have been amended to improve clarity. In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on April 29, 2003.

Attorney for Applicant(s) — Date of Signature: 4/29/03

Respectfully submitted,

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